

day. The results of a further examination of the question I hope to submit to the readers of 'The Ibis' in the near future.

Some years ago Mr. J. G. Goodechild, in his paper on the "Cubital Coverts of the *Euornithes*"\*, contended that the Birds-of-Paradise were unique among the *Passeres* in that they lacked median coverts. He relied, apparently, solely on the overlap of the feathers. A more thorough examination of the wing shews that Mr. Goodechild was mistaken in this matter. The wing is of the normal *Passerine* type, though it may possess certain peculiarities of overlap. This point, from lack of fresh specimens, I have been unable to determine. The evidence from skins is absolutely unreliable on this subject.

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XXVIII.—*On a small Collection of Birds from the Wadi-en-Natrûn, Egypt.* By W. L. S. LOAT, F.Z.S.

THE Wadi-en-Natrûn, or Natron Valley, of Egypt is situated in the Libyan Desert about seventy miles W.N.W. of Cairo, and sixty miles nearly due south of Alexandria †. The valley, which is twenty-one miles in length from end to end, lies approximately W.N.W. by E.S.E., and contains a chain of ten alkaline lakes yielding the natron from which the soda-ash of commerce is obtained. Scattered throughout the Wadi are a number of freshwater pools, generally more or less surrounded by a dense growth of a species of papyrus, locally known as "bourdy," which also covers large tracts of the marshy ground, forming, in fact, nearly ninety per cent. of the vegetable growth found there. Tramping through these marshes is by no means pleasant, as the ground under foot generally consists of soft black mud, which in places gives off sulphuretted hydrogen at every step. On the higher ground are stretches of sand-hills sparsely

\* "The Cubital Coverts of the *Euornithæ* in relation to Taxonomy," Proc. Roy. Phys. Soc. Edinb. vol. x. (1888-90).

† These distances are taken from the centre of the Wadi.

covered with "halfa"-grass and hardy plants; beyond is the desert in which are situated a few monasteries inhabited by Coptic monks.

As the Wadi-en-Natrûn is private property, it was necessary to obtain permission to reside there; this was kindly granted me by the Salt and Soda Company to whom it belongs. From the English staff in charge I received every assistance and much useful information as to the most likely places at which to obtain birds, but owing to their scarcity I made but a short stay, lasting only from January 21st to February 24th (1903). This scarcity, not only in point of numbers, but of species, is hardly to be wondered at, when the character and position of the Wadi are taken into consideration, with its alkaline lakes and lack of suitable food, especially for small birds, insect-life being conspicuous by its absence, at any rate during the time that I remained there. Its isolated position, however, would, I imagine, chiefly account for this lack of birds, lying as it does thirty miles (at its nearest point) from the cultivated land of the Nile on the east, and about forty miles from it on the north. The great mass of migrants striking the coast in the neighbourhood of Alexandria would diverge slightly to the east and follow the cultivated land as they proceeded on their journey south; moreover, those migrants that do reach the Wadi evidently come from the north, but, instead of deviating to the east, continue in a direction nearly due south.

Above, in referring to the lack of insect-life, I should have added that this does not apply to the mosquito, for on the two or three occasions when I awaited the evening flight of ducks close to some freshwater pools they (the insects, not the ducks) came over in clouds and attacked me with the greatest persistence.

During my stay I obtained or identified forty-five species of birds; nearly all of these, however, were migrants, the number of residents being very limited.

Although I secured nothing of particular interest, I thought that a list of birds from this rather out of the way spot

might be of some slight value to those interested in the birds of Egypt, no one having, so far as I am aware, collected there before\*.

In the naming and arrangement of the various species found, I have followed Capt. Shelley's 'Handbook of the Birds of Egypt.' Mr. Ogilvie-Grant, of the Natural History Museum, has kindly assisted me in the determination of some of them. Those marked with an asterisk (\*) were identified, but examples were not obtained.

1. SAXICOLA SALTATRIX Ménétr. *Ménétries's Wheatear*.  
*Saxicola isabellina* Rüppell.

A few individuals were generally to be seen near some buildings that were close to the desert. The other common Egyptian species, viz. *S. ananthe*, was not met with.

2. SAXICOLA DESERTI Rüpp. *Desert-Chat*.

A few were usually to be found along the edge of the desert.

3. PRATINCOLA RUBICOLA (Linn.). *Stone-Chat*.

♂. 29th Jan. ♀. 5th Feb.

Was first seen on 21st Jan. Not uncommon.

4. RUTICILLA PHENICURUS (Linn.). *Redstart*.

♂. 2nd Feb. ♀. 9th Feb.

Was first noticed on 21st Jan. An uncommon species.

5. CYANECULA SUECICA (Linn.). *Blue-throated Warbler*.

♀. 2nd Feb. ♀. 9th Feb.

Uncommon. Both specimens were obtained on an open piece of ground near a freshwater pool and close to a clump of *bourdy*.

6. PSEUDOLUSCINIA LUSCINIOIDES (Savi). *Savi's Warbler*.

♂. 9th Feb.

Of this species, as well as the other Warblers, it was difficult to get a glimpse, on account of their keeping to the

\* Messrs. N. C. Rothschild and F. R. Henley, who were in the Wadi at the same time that I was, obtained a few birds, some of which I believe were presented to the Medical School, Cairo.

dense *bourdy* growth near the freshwater pools and wetter portions of the marshes; and it was only by sitting down and patiently waiting till they came gradually, whilst in search of food, to the edge of the reeds, that I got the chance of a shot.

7. CALAMODYTA SCHÆNOBÆNUS (Linn.). *Sedge-Warbler*.  
*Acrocephalus phragmitis* (Bechstein).

♀. 2nd Feb.

Uncommon. Frequenting the same spots as the preceding species.

8. ACROCEPHALUS STENTORIUS (Hempr. & Ehr.). *Clamorous Sedge-Warbler*.

♂. 8th Feb. ♂. 10th Feb. ♂. 14th Feb.

Fairly common. It generally kept to the thicker portion of the *bourdy*, but always betrayed its presence by its loud and peculiar note, which was uttered almost continuously. All the three specimens obtained were in worn and faded plumage.

9. DRYMCEA GRACILIS (Rüpp.). *Graceful Warbler*.

Not uncommon amongst the *bourdy*.

Shelley in his 'Handbook to the Birds of Egypt,' pp. 98 & 99, says: "There are apparently two constant forms of this bird, but they hardly differ sufficiently to be separated as distinct species." He considers that those from Lower Egypt are generally darker in colour, have the shaft-markings more pronounced, are larger, and have darker bills; while those from Upper Egypt and Nubia are mostly paler. The two females that I obtained at the Wadi were light-coloured birds with pale lower mandibles. A male shot on an island in Lake Menzaleh in the Delta was of the dark type with a black bill, while another male obtained in Nubia belonged to the light-coloured type and had a dark brown bill.

10. PHYLLOSCOPUS RUFUS (Gm.). *Chiffchaff*.

♂. 18th Feb.

This bird's characteristic note was first heard on Feb. 10th. It frequented the same spots as the other Warblers.

11. *HIRUNDO RUSTICA* Linn. *Chimney-Swallow.*

♂. 23rd Feb.

This was the first time that I noticed this bird, and it was only seen on one or two occasions subsequently.

12. *HIRUNDO RIOCOURII* Audouin. *Oriental Chimney-Swallow.*

A few of these birds were generally to be met with in various parts of the Wadi.

13. *MOTACILLA ALBA* Linn. *White Wagtail.*

Fairly common.

14. *BUDYTES FLAVA* (Linn.). *Grey-headed Yellow Wagtail.*

The Grey-headed Yellow Wagtail was first met with in a flock on Feb. 10th, running about on a patch of short grass close to a freshwater pool. Out of this flock I obtained four males and a female, all of which I consider to belong to this species, although Shelley in his 'Handbook to the Birds of Egypt,' pp. 128 & 129, gives two species of Grey-headed Yellow Wagtails, viz. *B. flava*, with "a distinct white eyebrow" and a wing-measurement of 3.2 in., and *B. cinereocapilla*, with an "entire absence of white eyebrow" and wing 2.9 in. In my specimens, two of the males have a distinct trace of white eyebrow and the wing 2.9; while the other two have the same length of wing and only a slight trace of white beyond the eye and not immediately above it; the female, however, which was one of the same flock, has a very distinct eyebrow of a dirty white colour.

15. *ANTHUS CERVINUS* Pall. *Red-throated Pipit.*

This species, which was the only kind of Pipit met with, was fairly numerous, and generally to be found on any patch of damp ground in the vicinity of the lakes and freshwater pools.

16. *CERTHILAUDA DESERTORUM* (Stanley). *Bifasciated Lark.*

This bird was not uncommon along the edge of the desert.

17. *GALERITA CRISTATA* (Linn.). *Crested Lark.*

A few were generally to be met with, but usually in

the vicinity of habitations. They all belonged to the light-coloured variety.

18. *CIRCUS ÆRUGINOSUS* (Linn.). *Marsh-Harrier*.

A specimen was obtained on Jan. 26th, and others were seen on one or two occasions slowly flying about above the *bourdy* on the look-out for small birds.

19. \**CIRCUS PALLIDUS* Sykes. *Pale-chested Harrier*.

Seen on one occasion only.

20. *FALCO ÆSALON* Linn. *Merlin*.

A male was obtained on Feb. 12th.

21. *COTURNIX COMMUNIS* Bonn. *Quail*.

A dead Quail was picked up on the edge of the desert on Feb. 11th.

22. *CURSURIUS GALLICUS* Gm. *Cream-coloured Courser*.

This species was met with on two or three occasions along the edge of the desert. It is somewhat shy and not easy to approach. The colour of its plumage, harmonizing as it does with the sand of the desert, makes it a difficult bird to distinguish until it moves.

23. \**VANELLUS CRISTATUS* Meyer. *Lapwing*.

A flock of five individuals of this species was seen on Jan. 25th; and several more were observed on subsequent occasions, frequenting a large piece of marshy ground covered with short grass.

24. \**HOPLOPTERUS SPINOSUS* (Linn.). *Spur-winged Plover*.

A solitary individual was seen on Feb. 15th. I was informed that a number of these birds had been seen in the Wadi during the previous September.

25. *ÆGIALITIS CANTIANA* (Lath.). *Kentish Plover*.

A few individuals were generally to be found along the edges of some of the lakes and freshwater ponds.

26. \**NUMENIUS ARQUATA* Linn. *Curlew*.

This species was seen on one or two occasions.

27. *LIMOSA ÆGOCEPHALA* (L.). *Black-tailed Godwit*.

A single specimen was obtained on Feb. 15th.

28. MACHETES PUGNAX (Linn.). *Ruff*.

The Ruff was fairly numerous.

29. \*GALLINAGO MEDIA Leach. *Snipe*.

Generally distributed throughout the more marshy parts of the Wadi, but nearly always in places where there was a certain amount of *bourdy* growing.

30. \*GALLINAGO GALLINULA (Linn.). *Jack-Snipe*.

This species was flushed on one or two occasions, but from more open ground than was the case with the preceding.

31. TRINGA MINUTA Leisler. *Little Stint*.

This bird was fairly numerous, and was generally to be met with round the edges of the open freshwater ponds.

32. TOTANUS CALIDRIS Linn. *Redshank*.

A few were generally to be found on the shores of some of the lakes and larger freshwater pools. One evening, about half an hour after sunset, while awaiting the evening flight of Ducks, two fair-sized flocks passed me flying low and at a great pace.

33. TOTANUS STAGNATILIS Bechst. *Marsh-Sandpiper*.

This Sandpiper was not common. It frequented the large shallow freshwater ponds.

34. TOTANUS GLAREOLA (Linn.). *Wood-Sandpiper*.

By no means a common bird, and only met with on two or three occasions. When disturbed it goes off with a twisting flight, then turns short and drops abruptly to the ground, after the manner of a Jack-Snipe.

35. RECURVIROSTRA AVOCETA L. *Avocet*.

Two or three flocks were seen standing in the shallower parts of one or two of the more secluded lakes.

36. PHŒNICOPTERUS ANTIQUORUM Bp. *Flamingo*.

On one of the largest alkaline lakes an immense flock of these birds, numbering several thousands, was generally to be seen, standing well out in the shallower portions, near the centre of the lake. I noticed that they often became very

noisy towards sunset, keeping up their clamour for several hours after it was dark.

37. *RALLUS AQUATICUS* L. *Water-Rail.*

Mr. Newlove, of the English staff, shot one of these birds in a patch of *bourdy* growing by the edge of a freshwater pool.

38. *FULICA ATRA* Linn. *Coot.*

Several of these birds frequented the larger freshwater ponds.

39. \**ANAS BOSCHAS* Linn. *Wild Duck.*

One of the least numerous of the Duck-tribe met with in the Wadi.

Speaking generally, the Anatidæ were well represented in point of numbers, if not in species. They arrive, as I was informed, during December, and take their departure about the beginning of April, though a few remain all the year round. The greater number passed the day on the larger alkaline lakes, leaving them about sunset for their feeding-grounds in the freshwater pools and wetter portions of the marshes.

40. *DAFILA ACUTA* (Linn.). *Pintail.*

A fairly numerous species. Locally known as "Balboulic."

41. *RHYNCHASPIS CLYPEATA* (Linn.). *Shoveler.*

The most abundant of all the Ducks. Known locally by the name of "Abu mulla'a," meaning "Father of a spoon."

42. *QUERQUEDULA CRECCA* (Linn.). *Teal.*

Next to the Shoveler, I should consider this to be the most numerous species. Its local name is "Kcesh."

43. *MARECA PENELOPE* (Linn.). *Wigeon.*

I did not find this a common species.

44. *NYROCA LEUCOPHTHALMA* (Bechst.). *Ferruginous Duck.*

Although this Duck was obtained only on one occasion, it was not an uncommon species in the Wadi.

45. *PODICIPES MINOR* (Linn.). *Little Grebe.*

A few of these birds frequented some of the freshwater pools.



Two very common Egyptian residents, viz. the Parasitic Kite, *Milvus aegyptius*, and the Hooded Crow, *Corvus cornix*, were, so far as I could learn, never seen in the Wadi.

On Feb. 13th a Crow, which I took to be *Corvus umbrinus*, was observed near the edge of the desert.

The Hoopoe, *Upupa epops*, was occasionally seen in the Wadi.

Owls were very uncommon, two only having been observed during my stay: one was a small bird, which, in the distance, appeared to be of a more or less uniform greyish colour, and was seen, late one morning, sitting on a mound close to the edge of the desert. From its general appearance, I am inclined to think that it was *Scops giu*. The other Owl, a large dark-coloured bird, probably *Asio accipitrinus*, was observed flying around the spot where I was awaiting the evening flight of Ducks.

A large Vulture, possibly *Gyps fulvus*, was noticed on one occasion circling round at a great height.

A few Egyptian Vultures, *Neophron percnopterus*, are said to occasionally visit the Wadi.

On Feb. 18th a flock of about fifty Gulls was seen standing in one of the lakes, but too far off to be identified with certainty.

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XXIX.—*On further Collections of Birds from the Efulen District of Camaroon, West Africa.* By R. BOWDLER SHARPE, LL.D. *With Notes by the Collector, G. L. BATES.* —Part III.\*

(Plate IX.)

THE present paper continues the account of the collection sent home by Mr. Bates in 1904; while on his return to Europe he brought with him a further interesting series of birds, which I also catalogue, as they are mostly from the River Ja.

\* See Part I. 'Ibis,' 1904, p. 88; Part II. 'Ibis,' 1904, p. 591; and Mr. Bates's Field-notes above, p. 89.